



# 2019 DOMESTIC OSINT IED REPORT

**2019 TRIPwire Open-Source Intelligence Data and Summary Analysis of  
Domestic Explosive, Bomb-Making Material, and Improvised Explosive  
Device Incidents**





## SCOPE

This Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA) Office for Bombing Prevention (OBP) annual report provides a national- and regional-level open-source assessment of domestic explosive, bomb-making material (BMM), and improvised explosive device (IED) incidents in the United States from 1 January through 31 December 2019.

## SOURCING

The data presented in this annual report is derived from open-source reporting by news outlets, social media, and other multimedia channels related to explosive activity. This includes the discovery of BMM, suspicious packages, bomb threats, and other types of IED incidents in the United States and extended U.S. territories for calendar year 2019. International incidents may also be referenced for additional context. The product also includes analysis developed from focused open-source research and legacy **TRIPwire** data from 2014 to 2019, which is used for comparison analysis of multiple year trends. Population figures used in this product are derived from the Census Bureau's Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico from 1 April 2010 to 1 July 2019. More information on population estimates is available at [www.census.gov](http://www.census.gov).

## DISCLAIMER

*This product provides a statistical analysis of available open-source reporting of explosives-related events, bomb threats, and IED activity in the United States and its territories. Due to the nature of open-source intelligence (OSINT) collection, this data may not reflect all bomb-related incidents or casualty figures during the stated period. The provided open-source data is derived from news, social media, and/or other media, including the deep/dark web, and is verified source material to the extent possible. It does not include classified or law enforcement sensitive information. It should be noted that incidents that received a response from law enforcement, first responders, or other authorities are frequently reported only through official channels, such as locally held police logs, because of the nature of criminal investigations. Therefore, some information may not be available and/or captured in the data used to compile this report. Nonetheless, the available records do provide a significant and representative sample of all reported domestic explosive-related events in open-source reporting.*

## WARNING

This product may contain U.S. person information that has been deemed necessary for the intended recipient to understand, assess, or act on the information provided. U.S. person information is highlighted with the label USPER and should be protected in accordance with constitutional requirements and all federal and state privacy and civil liberties laws.

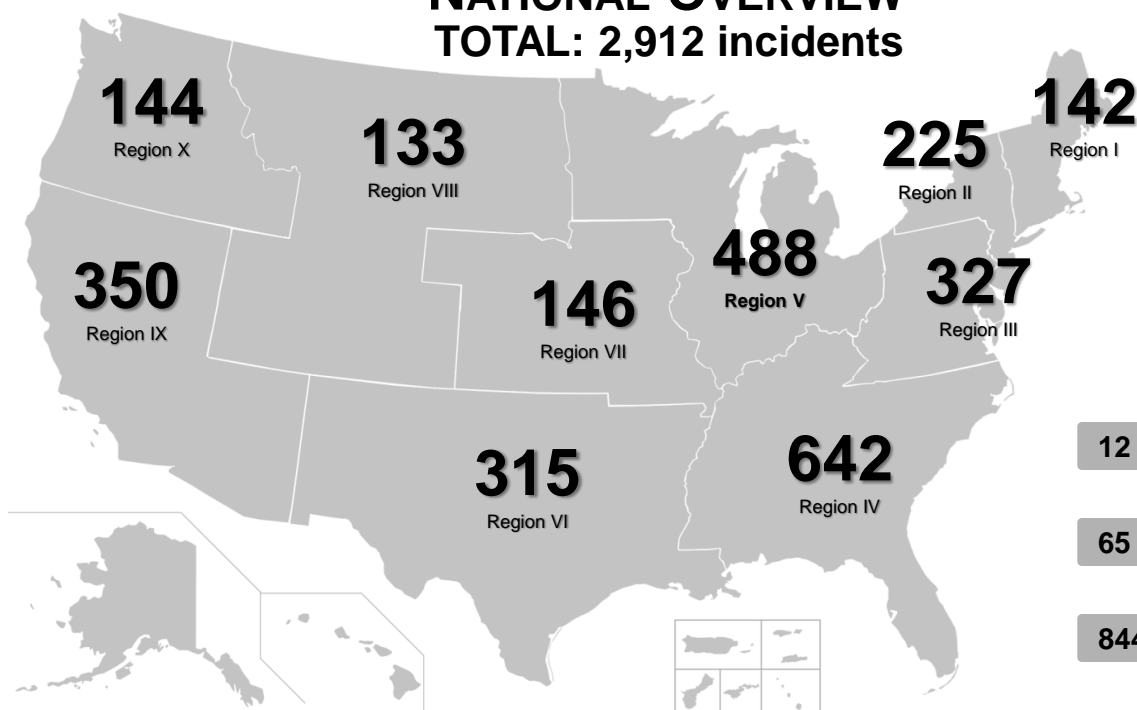


## TABLE OF CONTENTS

<b>Scope.....</b>	<b>1</b>
<b>Sourcing .....</b>	<b>1</b>
<b>Disclaimer .....</b>	<b>1</b>
<b>Warning .....</b>	<b>1</b>
<b>National Overview .....</b>	<b>3</b>
National Trends.....	3
Key Data Findings and Observations .....	4
Event Counts by Day .....	5
<b>Three year Comparative Analysis.....</b>	<b>6</b>
<b>Significant Thwarted Homegrown Violent Extremism Plots .....</b>	<b>7</b>
<b>Significant Thwarted Domestic Violent Extremism Plots.....</b>	<b>8</b>
<b>Significant Trends and Notable Incidents .....</b>	<b>9</b>
<b>Trending Tactics, Techniques, and Procedures .....</b>	<b>11</b>
<b>Federal Regional Data .....</b>	<b>15</b>
Federal Region I.....	15
Federal Region II .....	16
Federal Region III .....	17
Federal Region IV .....	18
Federal Region V .....	19
Federal Region VI.....	20
Federal Region VII .....	21
Federal Region VIII .....	22
Federal Region IX.....	23
Federal Region X .....	24
<b>2019 TRIPwire Reports .....</b>	<b>25</b>
<b>Index.....</b>	<b>26</b>
<b>Glossary and Contact .....</b>	<b>27</b>



## NATIONAL OVERVIEW TOTAL: 2,912 incidents



12 Killed



65 Injured



844 Arrested



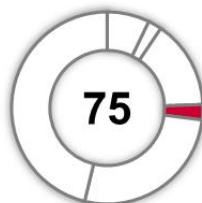
Device Functioned



Device Employed



Device Discovered



Bomb-Making Material

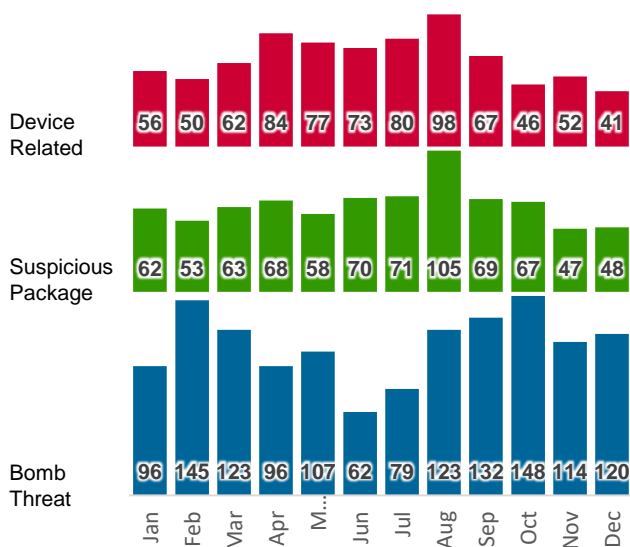


Suspicious Package

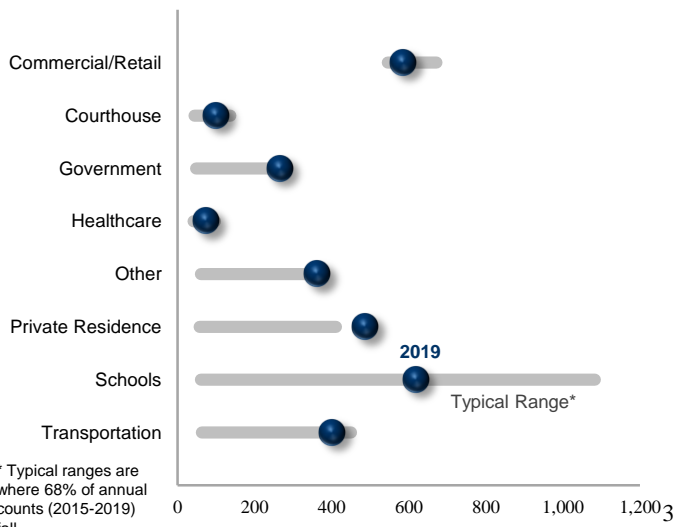


Bomb Threat

### Incidents by Month



### Incidents by Infrastructure Type



## **Key Data Findings and Observations**

- The total number of explosive and device-related incidents reported in open sources, including improvised explosive device (IED) activity, showed a -0.5% decrease in 2019 (2,912 total events) from 2018 (2,928 total events). However, actual device-related incidents (device functioned, device emplaced, device discovered, and bomb-making material [BMM]) increased in 2019 to 786 devices, compared with 718 in 2018 (+9.5%) and 684 in 2017 (+15%). There was a slight decrease (-2%) in the number of bomb threats, while suspicious package incidents marked a larger decrease (-6.6%) in 2019.
- Federal Regions IV (642 incidents) and V (488 incidents) remained the most active regions for the total number of recorded incidents. Regions VIII and III recorded the highest number of reported incidents per 1 million population, with 10.8 and 10.6 incidents per million, respectively.
- The total number of casualties in 2019 decreased slightly (-2.6%) compared with casualty incidents in 2018, with the total number of reported fatalities (12) and injuries (65) in 2019 compared to the total number of reported fatalities (15) and injuries (66) in 2018.

	2017	2018	2019
Total Reported Incidents	2930	2928	2912
Total Reported Casualties	71	81	77
Highest Federal Region by Total Number of Incidents	IV (582)	IV (628)	IV (642)
Highest Federal Region by Total Incident per 1 Million Population	VIII (13.7)	III (12.1)	VIII (10.8)
Highest Federal Region by Total Devices per 1 Million Population	VIII (4.2)	VII (4.0)	VII (4.3)

- Although schools recorded the highest number of incidents (620) in 2019, there was a marked decrease (-22%) from 2018. Incidents against commercial infrastructure came second (588), which was a significant increase (+119%) from 2018 but fairly commensurate with incident totals in 2017 (+1.4%). Incidents against private residences (490) showed a steady increase from 2018 (+9.4%) and 2017 (+21.1%).

## **Emerging and Notable Tactics, Techniques, and Procedures (TTPs)**

- The domestic use of homemade explosives (HMEs) continued to be a trend in 2019, with several notable incidents involving the illegal manufacturing of IEDs resembling M-type pyrotechnic devices.
- An Islamic State of Iraq and ash-Sham (ISIS)-aligned manual was reprinted in 2019 that drew attention to the Cybersecurity and Infrastructure Security Agency's (CISA) Bomb-Making Materials Awareness Program (BMAP) and encouraged future threat actors to try to avoid detection when acquiring BMM.
- Triacetone triperoxide (TATP) remained a dominant material used by malicious actors in incidents involving HMEs.
- Domestic ATM attacks by criminal actors continued to rise in 2019 (marking a steady increase since first reported), highlighting the need for increased awareness by first responders, public safety bomb technicians, and military explosive ordnance disposal technicians, who may encounter devices or blast scenes near ATMs.
- 2019 saw the first weaponized unmanned aircraft system (UAS) incidents in the United States, reinforcing the concern about UAS threats to vulnerable soft target infrastructure and mass gatherings.



All Events 2019

Mn	Wk	S	M	T	W	T	F	S
Jan	1			2	9	5	5	1
	2	2	5	10	7	6	8	1
	3	2	6	14	14	11	4	5
	4	0	9	10	14	9	8	1
	5	4	14	7	11	10	9	5
Feb	6	2	14	8	14	10	11	5
	7	3	17	18	10	8	4	7
	8	5	5	12	14	10	7	3
	9	6	7	9	16	9	4	5
	10	2	9	12	9	11	9	2
Mar	11	2	16	14	10	7	5	2
	12	2	15	20	10	9	10	1
	13	6	12	15	4	12	7	3
	14	3	8	10	11	8	7	8
	15	3	8	10	11	9	7	2
Apr	16	4	5	12	11	11	3	6
	17	3	9	17	9	10	9	6
	18	7	10	14	10	10	5	2
	19	6	14	13	12	19	11	6
	20	5	4	13	10	11	14	5
May	21	4	7	8	6	4	8	5
	22	7	2	7	6	2	6	4
	23	2	8	8	11	8	11	6
	24	6	8	8	9	7	5	0
	25	5	11	11	8	12	6	2
Jun	26	5	7	5	6	9	8	4
	27	5	11	5	13	9	1	8
	28	3	6	11	7	6	7	11
	29	4	7	10	15	9	6	5
	30	4	13	4	8	10	8	4
Jul	31	1	7	7	10	10	6	7
	32	4	18	12	16	13	8	6
	33	6	11	16	14	17	18	6
	34	5	10	14	11	9	6	5
	35	5	16	18	16	10	10	3
Aug	36	4	5	5	7	14	19	3
	37	3	18	10	16	9	9	3
	38	6	18	8	16	11	7	3
	39	8	9	5	14	12	10	1
	40	2	13	15	19	14	14	2
Sep	41	3	10	9	7	10	6	3
	42	4	5	9	5	10	7	0
	43	1	8	21	8	7	6	4
	44	14	7	13	11	9	5	2
	45	6	11	8	11	11	5	2
Oct	46	5	20	5	8	9	5	4
	47	4	18	12	7	6	9	5
	48	3	9	8	2	3	3	7
	49	1	14	6	7	13	20	2
	50	3	11	15	15	7	4	2
Nov	51	1	13	10	8	5	5	2
	52	7	1	4	3	10	2	8
	53	3	3	4				

## EVENT COUNTS BY DAY

These charts document the total incident counts (left) and the device-related counts (right) per day. Green reflects low counts, white are moderate counts, and pink/red reflects high incident counts.

The highest number of IED-related incidents continued to be reported on weekdays, while weekends saw the lowest number of reported incidents.

The highest number of device-related incidents were reported on 5 August and included three incidents where improvised incendiary devices (IIDs) and a homemade pyrotechnic device functioned.

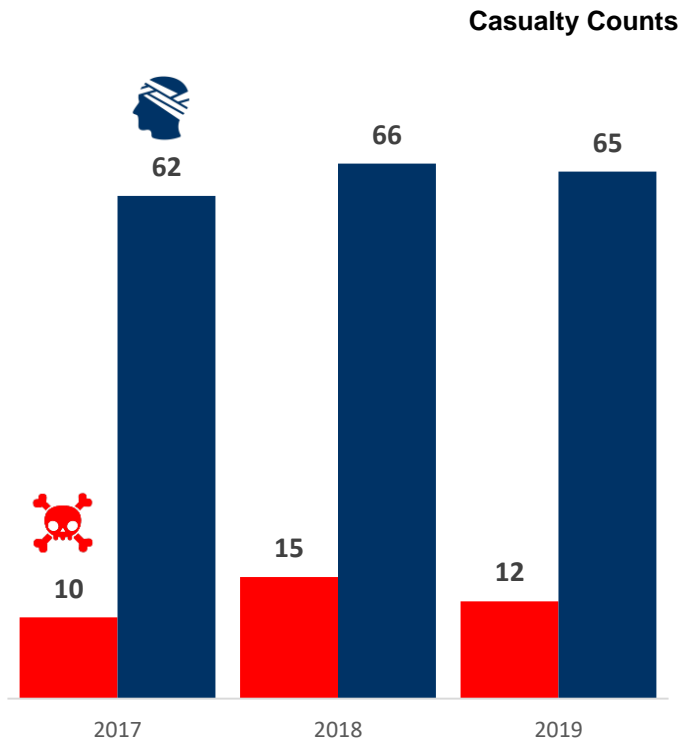
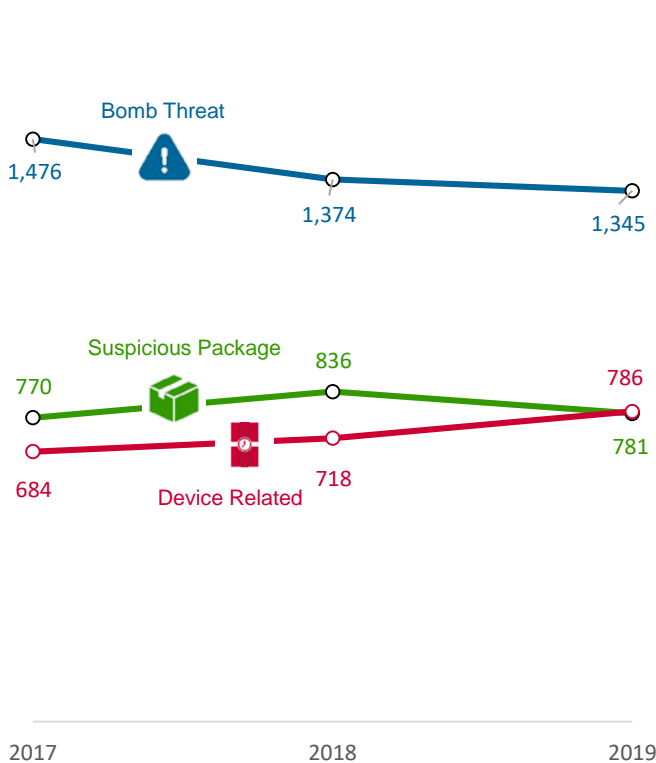
August was the most active month for total IED-related events, with 18 of the 31 days involving 10 or more recorded incidents. Of the 327 total IED-related events, 99 were device related. Three individuals sustained injuries, with no recorded fatalities, from these events.

Device-Related Events 2019

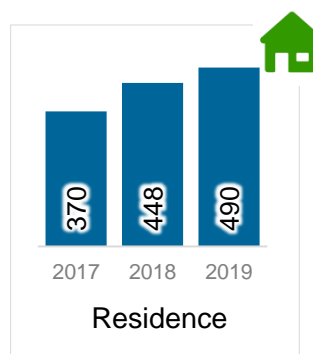
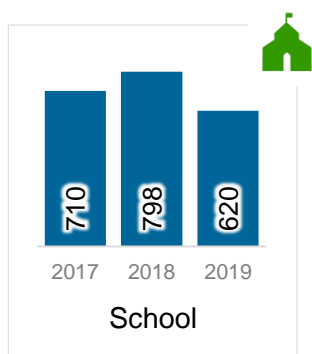
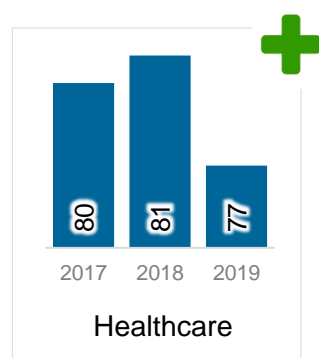
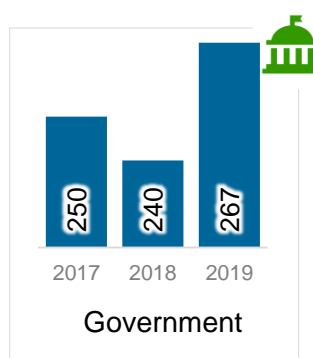
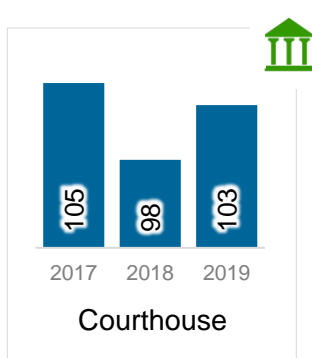
Mn	Wk	S	M	T	W	T	F	S
Jan	1			1	6	2	2	1
	2	1	3	4	1	1	3	0
	3	1	1	2	4	1	1	1
	4	0	1	4	2	1	2	1
	5	2	2	1	3	1	4	1
Feb	6	1	5	2	3	0	1	2
	7	1	1	3	2	0	1	1
	8	0	0	2	3	1	3	1
	9	2	2	2	5	1	1	3
	10	1	3	1	1	2	3	1
Mar	11	0	2	0	4	1	0	1
	12	2	1	7	1	2	5	0
	13	4	3	3	0	6	2	1
	14	1	1	5	5	3	1	6
	15	2	3	4	3	2	0	0
Apr	16	3	0	2	3	4	2	3
	17	1	4	6	5	4	1	2
	18	4	2	3	2	5	0	1
	19	2	3	2	2	7	3	3
	20	2	1	3	2	4	3	5
May	21	2	2	1	2	1	4	2
	22	5	0	2	3	0	3	1
	23	2	2	2	4	5	7	3
	24	1	4	2	4	0	1	0
	25	2	5	3	2	3	2	0
Jun	26	1	1	0	3	3	4	3
	27	3	2	3	3	3	1	7
	28	2	2	5	4	2	0	5
	29	0	1	2	7	5	3	1
	30	2	5	1	1	2	2	2
Jul	31	0	3	1	3	2	1	3
	32	4	8	5	3	2	4	2
	33	2	5	7	4	5	4	3
	34	1	4	2	1	1	0	2
	35	3	4	5	3	4	3	1
Aug	36	1	3	0	1	5	6	1
	37	1	4	2	1	1	3	0
	38	1	4	4	4	3	1	1
	39	4	5	0	3	4	3	0
	40	0	1	3	0	4	1	0
Sep	41	2	1	2	2	1	2	1
	42	0	0	1	1	1	0	0
	43	0	0	6	2	2	2	2
	44	1	1	5	1	2	2	1
	45	1	4	0	2	1	1	1
Oct	46	2	2	1	2	1	1	1
	47	1	3	5	2	2	3	0
	48	2	1	2	0	1	1	6
	49	0	0	2	0	3	3	1
	50	0	0	5	3	0	0	0
Nov	51	1	0	3	1	0	2	1
	52	4	1	2	2	1	0	1
	53	1	1	3				



## THREE-YEAR COMPARATIVE ANALYSIS



## Event Count Comparisons by Infrastructure Type





## SIGNIFICANT THWARTED HOMEGROWN VIOLENT EXTREMISM PLOTS

The United States continues to face a heightened threat from homegrown violent extremists (HVEs) resorting to violence in the name of foreign terrorist organizations (FTOs), including the Islamic State of Iraq and ash-Sham (ISIS), al-Qa'ida, and other groups. An HVE is defined as a person of any citizenship who has lived and/or operated primarily in the United States or its territories who advocates, is engaged in, or is preparing to engage in ideologically-motivated terrorist activities (including providing support to terrorism) in furtherance of political or social objectives promoted by an FTO, but is acting independently of direction. HVEs are distinct from domestic terrorists who engage in unlawful acts of violence to intimidate civilian populations or promote an ideology *without direction from or influence from a foreign actor*. Some observed activities of HVEs include constitutionally protected activity, which by itself may not be indicative of criminal activity associated with terrorism.

### HVE Indicators:

- Posting on the internet or social media sites public comments or links that promote FTOs or stating the desire to pursue acts of violence in the United States on behalf of FTOs.
- Communicating with known or suspected U.S. or overseas-based violent extremists in person or on social media sites.
- Performing internet research for target selection and/or acquisition of technical capabilities, without a reasonable explanation, to plan for attacks in the United States.
- Conducting suspicious financial transactions to obtain the funds to acquire weapons, explosives, or precursors to build IEDs.

### 17 JAN Highlights

**Incident:** A male suspect from Georgia was arrested for plotting an attack in DC  
**Device Type(s):** 3 IEDs (with remote initiation), 1 AT-4 shoulder-launched rocket, 3 semi-automatic assault rifles  
**Target(s):** White House, Washington Monument, Lincoln Memorial, and a specific unidentified synagogue



### 28 APR Highlights

**Incident:** An Army veteran plotted an attack seeking revenge for recent attacks against Muslims  
**Device Type(s):** unspecified number of IEDs (pressure cookers with long nails for shrapnel)  
**Target(s):** Los Angeles-area white nationalist rally (also mentioned anti-Semitic victims, law enforcement, places of worship, a military facility, southern California freeways, and the Santa Monica Pier)

### 6 JUN Highlights

**Incident:** A male suspect who ideologically supported the 9/11 attacks and ISIS was arrested for plotting an attack in NY  
**Device Type(s):** Desired person-borne IED (PBIED) in the form of an explosive suicide vest, 2 Glock 19 9mm semi-automatic pistols  
**Target(s):** Times Square



### 19 JUN Highlights

**Incident:** A male Syrian refugee was arrested for plotting an attack as revenge for ISIS fighters in Nigeria  
**Device Type(s):** BMM (consumer products that contained necessary chemicals, batteries, nails for shrapnel), provided instructional IED-construction documents  
**Target(s):** A Pittsburgh-area Christian church, the Legacy International Worship Center





## SIGNIFICANT THWARTED DOMESTIC VIOLENT EXTREMISM PLOTS

The FBI and DHS define domestic violent extremists (DVEs) as individuals based and operating entirely within the United States or its territories without direction or inspiration from a foreign terrorist group or other foreign power, who seek to further political or social goals, wholly or in part, through unlawful acts of force or violence. As with HVEs, the mere advocacy of political or social positions, political activism, use of strong rhetoric, or generalized philosophic embrace of violent tactics may not constitute extremism and may be constitutionally protected. While the majority of domestic incidents involve a lone offender with a firearm, law enforcement interrupted several domestic terror plots in 2019 involving an IED. The perpetrators reflected a range of motivations, including white supremacist extremism (WSE) and black supremacist extremism (BSE).

For more information on the risks posed by DVEs sharing instructions on BMM and IED construction via encrypted messaging systems, online forums, and the dark web, see the Extremist Threat Report on TRIPwire at [Domestic Violent Extremists Sharing HME and IED Instructions Online to Increase Capabilities](#).

### 22 JAN Highlights

**Incident:** 3 self-radicalized WSE male suspects and a juvenile were arrested for plotting an attack

**Device Type(s):** 3 IEDs (contained in plastic pipes and a glass mason jar, all wrapped in duct tape, with gunpowder main charges and nails as shrapnel), 23 firearms

**Target(s):** The small Muslim community of Islamberg in Delaware County, NY



### 21 SEP Highlights

**Incident:** A male army soldier with Nationalist and Neo-Nazi ideologies was arrested for plotting an attack

**Device Type(s):** Desired IED (with cellphone initiation), desired vehicle-borne IED, distributed instructional IED-construction guidance, recipe for creating improvised napalm

**Target(s):** "Antifa" activists and an unidentified major news network



### 8 AUG Highlights

**Incident:** A male suspect was arrested for a WSE attack plot

**Device Type(s):** BMM (chemicals and IED components), hand-drawn schematics for a potential attack including drawings of timed explosive devices and IED circuits

**Target(s):** Las Vegas-area synagogue, Anti-Defamation League, and bar that caters to the LGBTQ community

### 10 DEC Highlights

**Incident:** Two suspects were arrested for an anti-Semitic/BSE attack

**Device Type(s):** IED (potential to kill/maim people up to 5 football fields away), enough BMM for a second device, AR-15-type weapon, shotgun, a semiautomatic firearm, Glock, weapon with a homemade silencer and a homemade device to catch shell casings

**Target(s):** Unknown plan for IED; JC Kosher Supermarket (shooting spree)



### 1 NOV Highlights

**Incident:** A male suspect was arrested for a WSE attack plot

**Device Type(s):** Desired IEDs (pipe bombs, dynamite)

**Target(s):** Pueblo-area Temple Emanuel synagogue



## SIGNIFICANT TRENDS AND NOTABLE INCIDENTS

### Targeting Law Enforcement and First Responders

2019 saw continued attempts to attack law enforcement personnel and property in targeted incidents or during response efforts for other incidents. There was continued concern, as well, for first responders approaching sites or suspected laboratories due to the presence of HME manufacturing and precursor chemicals. Secondary attacks against responders remains a top concern owing to terrorist propaganda that calls for complex, coordinated attacks and recent domestic and international attacks where secondary devices targeted first responders and victims.

- **23 January 2019:** Authorities attempted to speak to a male suspect in **California**, who was reportedly making bomb threats, when he threatened to detonate a person-borne IED (PBIED), described as a homemade suicide vest.
- **9 August 2019:** A male suspect exited his trailer in **California** after barricading himself inside wearing body armor and holding a PBIED, which he attempted to detonate near law enforcement. A second device was inside the trailer.
- **10 November 2019:** Two suspects threw an explosive device into a **Connecticut** police department's parking lot; the device landed near a gas pump and police vehicles and discharged a 5- to 6-foot fireball.

### Student Threat Actors and School Plots

Schools recorded the highest number of incidents compared to other documented infrastructure types. While the majority of these incidents involved bomb threats and suspicious packages, device-related incidents continue to pose a significant threat. The percentage of device-related incidents affecting schools remained fairly steady in 2019 (3.9%) compared with 2018 (3.8%) and 2017 (3.2). There is still an interest in identifying bomb-making instructions from the internet and constructing IEDs and the easy accessibility of seemingly innocuous household items for these devices. The simplicity of the instructions enables juvenile actors to successfully construct these devices.

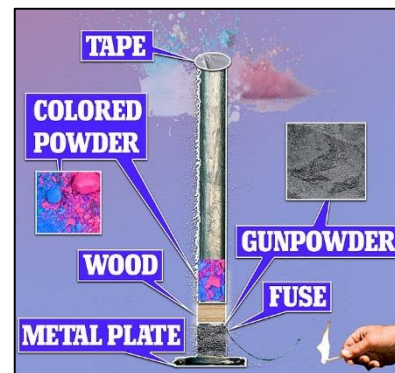
- **15 May 2019:** A tip led authorities to a 17-year-old **Texas** student's home, where they found potassium nitrate, charcoal, and sulfur. The student admitted to knowing how to make IEDs and maximize damage by using shrapnel as an enhancement and implied he would use the devices against his peers.
- **22 October 2019:** A 16-year-old **Washington** student detonated a pipe bomb in the school bathroom comprising more than 100 sparklers. The student claimed he was triggered by an argument with his ex-girlfriend, which motivated his actions. Authorities discovered a larger pipe bomb and a soccer ball packed with fireworks at the student's residence and concerning activity on the student's social media indicating a desire to attack his peers.
- **26 November 2019:** Authorities discovered BMM in a 15-year-old **Illinois** student's residence following a tip from a third-party indicating someone had recently bought materials used to make explosives. The BMM included explosive material that was described as highly volatile and included sodium azide and thermite; PVC piping with small "wick-sized" holes cut into the end of three pipes; high and low voltage electronics and switches; and numerous chemicals and compounds. The FBI also found suspected anti-Semitic accounts during a check of the teen's social media.

## SIGNIFICANT TRENDS AND NOTABLE INCIDENTS - CONTINUED

### Gender Reveals Gone Wrong

Gender reveals have gained in popularity in recent years with a trend toward more elaborate demonstrations. 2019 marked the first year that a participant at one such event was killed when explosive materials were used in the reveal. Fire officials warn against the use of HMEs as well as commercially available options due to their unpredictable nature. There is a concern gender reveals may continue to result in accidental casualties in the future.

- **26 October 2019:** A gender reveal explosion resulted in the death of a woman in Knoxville, **Iowa**, after she was struck in the head with fragmentation 45 feet away from the device.
- **27 October 2019:** The shockwave from a commercially available “gender reveal kit” rattled homes as far as 2 miles away and caused slight property damage in Waukee, **Iowa**.



Relatives put gunpowder in a homemade device, expecting to blow colored powder skyward, but when the device functioned it acted as a pipe bomb, hitting the victim and scattering fragmentation more than 100 yards away. (Source: Daily Mail)



One of the New Jersey devices  
Source: Daily Record



Oregon suspect  
Source: Oregon Live

### Personal Grievance-Motivated Attacks

A notable number of device-related and bomb threat incidents reported in 2019 developed out of personal grievances. Many of these incidents contribute to the data revealing a steady increase of incidents against private residences rather than other critical sectors.

- **1 February 2019:** A 31-year-old man threatened a woman with an IED prior to detonating the device in **New Jersey**. The suspect admitted to detonating a 2-lb IED and explained how he mixed potassium perchlorate, aluminum powder, and explosive target material to make several devices that were in his home. Two IEDs were discovered in his residence, including a container filled with BB fragments and another with several containers of lighter fluid fixed to a fuse.
- **16 April 2019:** A 49-year-old suspect in **Oregon** constructed a victim-operated IED comprising a chemical pressure device and dog excrement contained in a toolbox to target a former friend during a disagreement.
- **26 October 2019:** A 25-year-old man's family members notified authorities in **Pennsylvania** that he had purchased BMM and planned on using metal pipes and chlorine to construct the devices. The suspect explained he was angry at local residents for not accepting him and wanted to hurt people to get their attention.

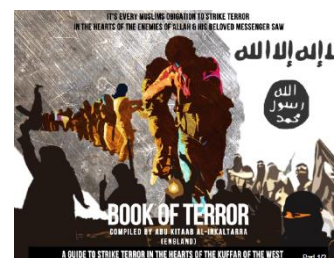
## TRENDING TACTICS, TECHNIQUES, AND PROCEDURES (TTPs)

### Use of Homemade Explosives (HMEs)

The use of HMEs continued to be a trend in 2019 by both domestic and FTO-inspired threat actors. In April 2019, an open Telegram channel republished the 2015 ISIS-aligned manual, *The Book of Terror: A Guide To Strike Terror In The Hearts Of The Kuffar Of The West*. The author draws the audience's attention to the DHS's counterterrorism efforts, which includes CISA's Bomb-Making Material Awareness Program (BMAP) designed to increase public and private sector awareness of HME. The author highlights a joint FBI-DHS advisory on suspicious behavior indicators with a target audience of U.S. businesses to prevent them from becoming unintentional participants in terrorist activities. The awareness of these U.S. counterterrorism resources has led the author to encourage his audience to recognize the suspicious indicators and patterns in order to avoid detection.

An Emergency Responder Note reference aid for those who may encounter HMEs can be found on TRIPwire at [Homemade Explosives Precursor Matrix](#). Precursor chemical-specific information is also available.

#### Common Household Items



Book of Terror Cover

## 2019 Significant U.S. HME Incidents

### HME Discovered in Vehicle

On 19 January 2019, **Arizona** authorities discovered an IED in a vehicle stopped for a traffic offense in Chandler. After finding the device in the trunk during a vehicle search, FBI agents and the Mesa Police Department Bomb Squad responded. Bomb disposal technicians rendered safe the device in a nearby field. The device was described as a small pill bottle containing a quantity of TATP with a protruding fuse. The suspect told officers that he used the TATP for a pyrotechnic display and target shooting and that he manufactured it in his home using instructions from the internet. The suspect had another pill bottle containing 25 grams of suspected methamphetamines.

### IEDs and Other Associated Components Found After Home Explosion

On 14 March 2019, **Wisconsin** and Federal authorities responded to reported explosions at a residence in Manitowoc and discovered a clandestine explosives lab in the basement. An ATF agent found unspecified quantities of RDX, PETN, nitroglycerine, and nitromethane, along with several IEDs. Police arrested the 34-year-old male occupant of the residence, who told investigators that he had intended to manufacture pyrotechnics and was unaware of the danger posed by the explosives and chemicals in his possession. No information was provided regarding how the man acquired the explosive materials in his possession.

## TRENDING TACTICS, TECHNIQUES, AND PROCEDURES (TTPs)

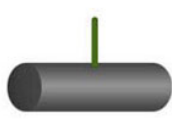
### Highlight: Improvised Illegal Pyrotechnic Devices

2019 saw a significant number of events involving IEDs resembling illegal pyrotechnic devices (i.e., M-80, M-100, M-250, M-1000) that resulted in serious injuries, particularly involving juveniles. These explosive devices typically are not submitted for testing and often contain significantly more energetic material than consumer-grade fireworks. The explosive compositions in these devices are extremely sensitive to heat, shock, electrostatic discharge, and friction that may unexpectedly cause the device to function, resulting in the potential for serious injuries or death. The individuals manufacturing, transporting, and using these devices often lack the experience with explosive materials and awareness of the proper proportions, which further compounds the risk. Some indicators of these IEDs include the presence of spiral wound cardboard tubes with hobby fuses, and the tubes may be 1- to 6-in long with diameters of an inch or more; sales occurring in non-commercial locations, such as out of a vehicle or residence; and devices lacking commercial packaging.

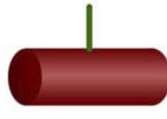
M-80



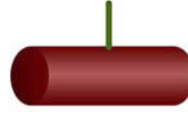
M-100, Silver Salute



M-250



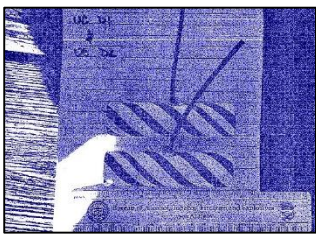
M-1000, Quarter Stick



Source: ATF Fact Sheet – Illegal Explosive Devices

### 2019 Pyrotechnic Injuries

- **19 March 2019:** Two male juveniles in **OH** injured from modified pyrotechnic device.
- **29 May 2019:** Male juvenile in **CA** injured from illegal M-80.
- **30 June 2019:** Female juvenile in **PA** injured from illegal device.
- **8 July 2019:** Male juvenile in **PA** injured from illegal device.
- **29 October 2019:** Female juvenile in **PA** injured from illegal M-250.



ATF photo of purchased devices  
Source: NBC 21WFMJ



Suspect Pictured  
Source: NBC 21WFMJ

### Significant Domestic Incident Involving Improvised Illegal Pyrotechnic Devices

On 2 May 2019, ATF agents arrested a 27-year old suspect, his 50-year-old father, and two associates aged 29 and 31 involved in the manufacture and sale of HME devices in **Ohio**. ATF agents arranged to buy 11 devices from one of the associates, which resembled large M-80 pyrotechnic devices but with significantly more flash powder. The associate revealed that he had obtained the devices from the suspect, who was manufacturing them at the residence shared with his father. The suspect sold 233 explosive devices to an undercover agent on 3 separate occasions in March and April. The fused devices were in tubes measuring 2- to 6-in long and contained anywhere from 8 to 56 grams of flash powder, whereas most commercial-grade fireworks contain no more than 0.05 grams of flash powder. After arresting the suspect, law enforcement officials discovered 516 homemade devices in the breezeway of the home. ATF agents also found evidence of explosives manufacturing, including tubs of ingredients used to make flash powder, empty cardboard tubes, and fuses, in the home of the second associate. In total, the ATF seized over 900 homemade devices during the investigation.

## TRENDING TACTICS, TECHNIQUES, AND PROCEDURES (TTPs)

### Explosive Attacks on ATMs

Explosive attacks on ATMs remain an ongoing problem for law enforcement, and open-source media reported at least 12 incidents in the United States in 2019. This marks a steady increase in domestic attacks since 2015, with indications these tactics will continue. While the success rate of ATM explosive attacks is low, unsuccessful attacks may still result in significant damage to the ATM and surrounding structures. Vehicles tend to be essential for physical ATM attacks as perpetrators travel to and from the scene and transport their equipment, of which most is readily and legally available. Most attacks occur in the early morning (between 0200 and 0500 hours local time), and perpetrators may conduct pre-attack surveillance to maximize their timing, as well as try to obscure their features to avoid identification.

### ATM Attack Tactics

Criminal actors typically conduct explosive attacks on ATMs using the following methods:

- **Explosives:** Criminal actors have used a wide assortment of explosives including pipe bombs and pyrotechnic devices, such as firecrackers and M-1000 “quarter-sticks,” to attack ATMs.
- **Gas Overpressure:** A flammable gas such as propane or oxyacetylene is pumped through flexible tubes into the ATM casing and then ignited, bursting open the ATM and allowing its contents to be accessed.

## Examples of 2019 U.S. Incidents Targeting ATMs

### Multi-City, Washington

March - April 2019

A criminal targeted five ATMs in the Tacoma area with explosive breaching attacks. Surveillance footage captured masked suspects tampering with the machines before the explosion/fires, but a suspect was not caught until after the fifth incident. The incidents had mixed robbery success.

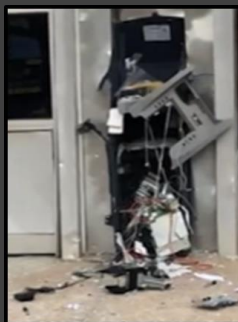


Source: Q13Fox

### Bensalem, PA

July 2019

Criminals approached a new ATM at a gas station and emplaced a lit M-type device in the machine. The device functioned, causing major destruction of the ATM. Two suspects fled on foot, indicating they may be local.



Source: NBC10 Philadelphia News

### Spring, TX

October 2019

Criminals emplaced a device described as gas canisters and a triggering device on a drive-thru ATM. The suspects fled the scene before detonating the device.



Source: ABC13 Eyewitness News

## TRENDING TACTICS, TECHNIQUES, AND PROCEDURES (TTPs)

### Threats from Weaponized Unmanned Aircraft Systems (UASs)

Threats from UASs continued to be of significance in 2019, with two incidents occurring within the United States. This marked a development from 2018, which saw a rise in criminal and FTO use of weaponized UAS platforms outside of conflict zones. The ability to attach explosives to UASs raises questions of appropriate law enforcement response and the concern that threat actors may use the TTP to target critical infrastructure, soft targets, and crowded, open-air venues.

For more information on potentially weaponized UASs, see the Emergency Responder Note on TRIPwire at [Indicators of Suspicious Unmanned Aircraft Systems \(UASs\)](#).

### 2019 U.S. Incidents Involving Weaponized UAS

#### Pennsylvania

On 7 June 2019, a 43-year-old male suspect was arrested for using a UAS platform to drop explosive devices on his ex-girlfriend's residence. The suspect was linked to a series of nighttime explosions beginning in March 2019. While several of the devices functioned, there were also unexploded devices discovered by neighbors in the area. The suspect possessed a UAS and seven IEDs in addition to firearms at the time of his arrest. An examination of the suspect's UAS revealed it had been modified with dashboard switches to operate devices that could release nails, ball bearings, and fluids, including paint thinner, that could damage vehicles, which was consistent with reported vandalism during the same timeframe as his UAS-attacks.



Devices collected from the suspect's residence  
Source: *Lehigh Valley Live*



Explosion recorded by surveillance camera owned  
by targeted property owner  
Source: *6ABC Philadelphia*

#### California

On 17 July 2019, the Los Angeles Police Department Bomb Squad responded to a downtown local public health agency building after a security guard identified a possible weaponized UAS on the roof. The UAS was described as having fireworks attached to it.

### International Incident: Colombia

In September 2019, authorities in Tumaco, Colombia, identified two UASs lacking external markings with two 600-gram explosives charges attached to the platforms with adhesive tape. The explosives also contained shrapnel to maximize potential damage. The army and police used signal inhibitors to avoid remote activation while executing render safe procedures. The army alleged the UAS belonged to dissidents planning to carry out attacks against the military and civilian population in Tumaco.



Colombian army executing render safe procedures on two  
explosives-laden UASs  
Source: *Insight Crime*



Region I State	All Incidents		Device Related Incidents	
	2019	per 1m population	2019	per 1m population
New Hampshire	15	11.0	9	6.6
Vermont	13	20.8	3	4.8
Massachusetts	57	8.3	17	2.5
Connecticut	36	10.1	7	2.0
Rhode Island	11	10.4	2	1.9
Maine	10	7.4	1	0.7
Totals	142	9.6	39	2.6

## Region I



1 Killed



4 Injured



24 Arrested



Device  
Functioned



Device  
Employed



Device  
Discovered



Bomb-Making  
Material

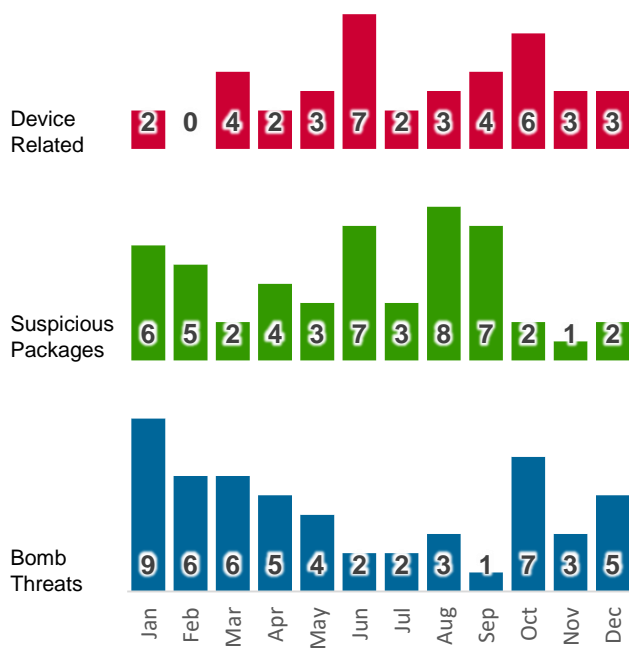


Suspicious  
Package

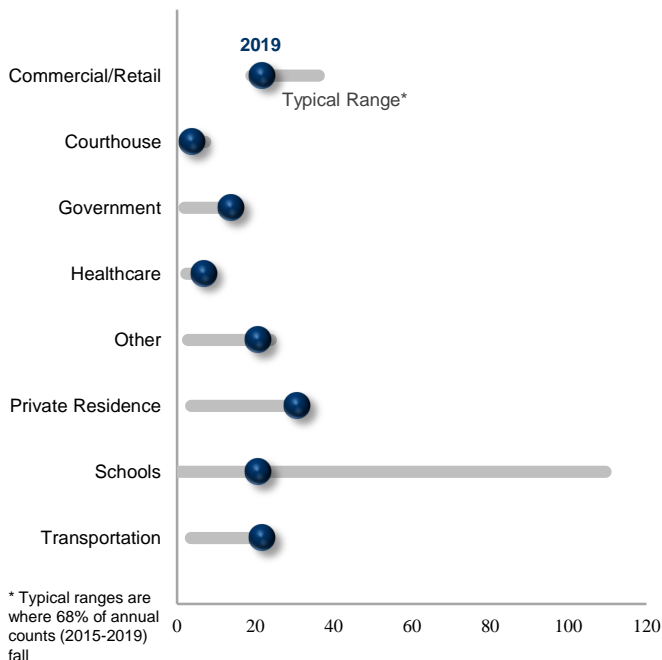


Bomb  
Threat

### Incidents by Month



### Incidents by Infrastructure Type





Region II State	All Incidents		Device Related Incidents	
	2019	per 1m population	2019	per 1m population
New Jersey	72	8.1	20	2.3
New York	153	7.9	27	1.4
Puerto Rico	0	0.0	0	0.0
Virgin Islands	0	0.0	0	0.0
Totals	225	7.1	47	1.5

## Region II



0 Killed



1 Injured



57 Arrested



Device  
Functioned



Device  
Employed



Device  
Discovered



Bomb-Making  
Material

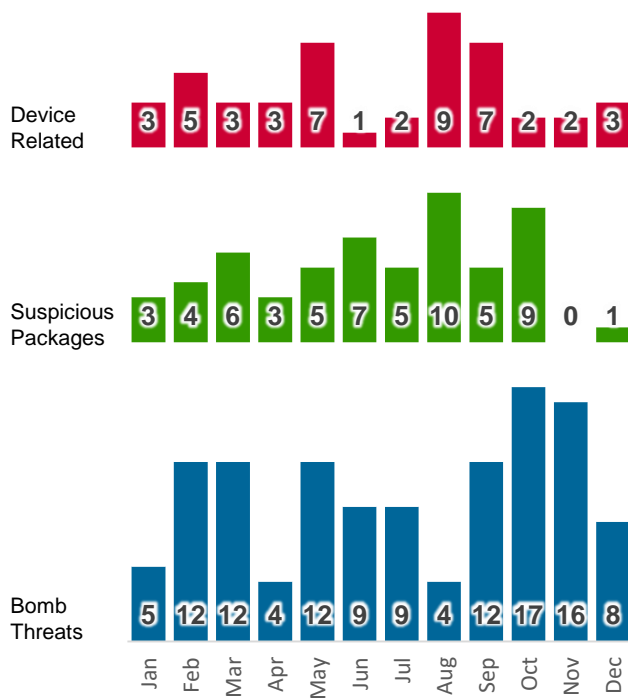


Suspicious  
Package

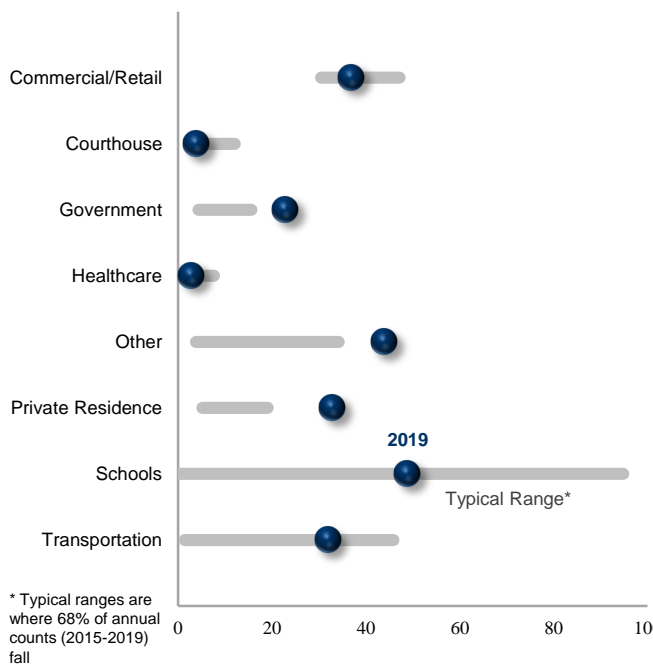


Bomb  
Threat

### Incidents by Month



### Incidents by Infrastructure Type





Region III State	All Incidents		Device Related Incidents	
	2019	per 1m population	2019	per 1m population
West Virginia	30	16.7	9	5.0
Pennsylvania	132	10.3	40	3.1
Delaware	8	8.2	3	3.1
District of Columbia	25	35.4	2	2.8
Virginia	87	10.2	10	1.2
Maryland	44	7.3	6	1.0
<b>Totals</b>	<b>326</b>	<b>10.6</b>	<b>70</b>	<b>2.3</b>

## Region III



0 Killed



9 Injured



87 Arrested



Device  
Functioned



Device  
Employed



Device  
Discovered



Bomb-Making  
Material

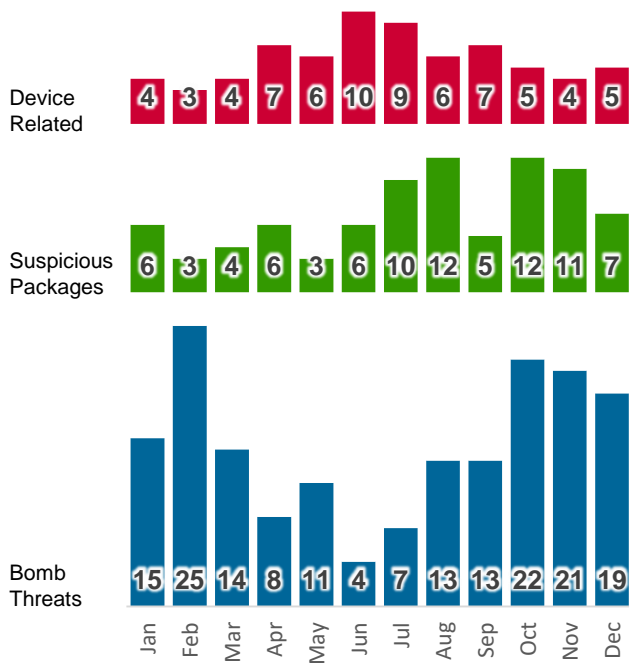


Suspicious  
Package

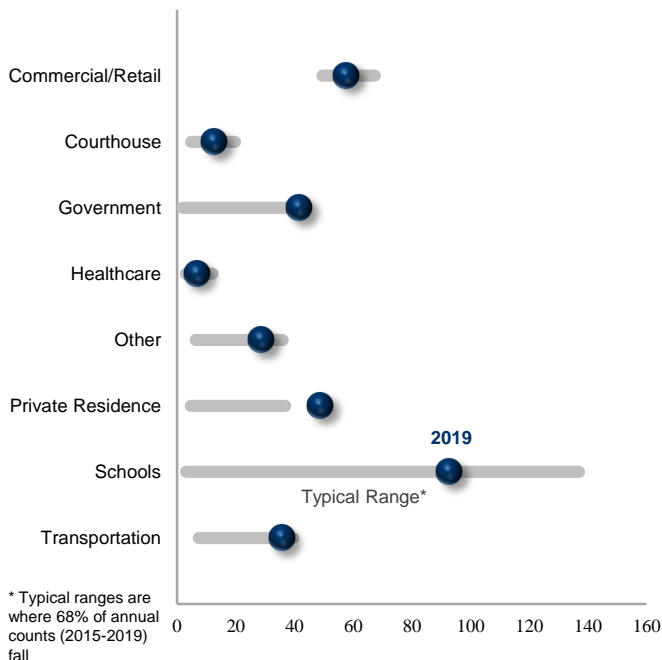


Bomb  
Threat

### Incidents by Month



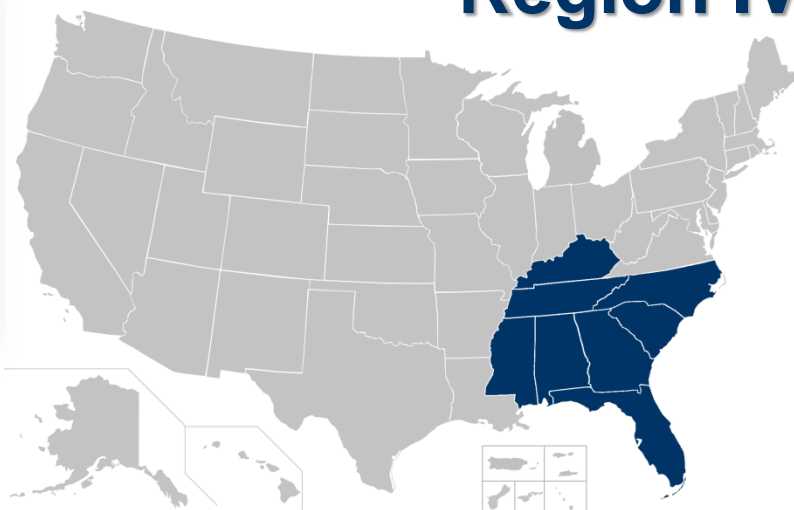
### Incidents by Infrastructure Type





Region IV State	All Incidents		Device Related Incidents	
	2019	per 1m population	2019	per 1m population
South Carolina	75	14.6	19	3.7
Kentucky	41	9.2	15	3.4
North Carolina	92	8.8	25	2.4
Tennessee	52	7.6	14	2.1
Alabama	51	10.4	10	2.0
Florida	216	10.1	37	1.7
Georgia	81	7.6	11	1.0
Mississippi	34	11.4	3	1.0
<b>Totals</b>	<b>527</b>	<b>7.7</b>	<b>120</b>	<b>1.5</b>

## Region IV



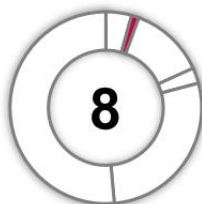
1 Killed



8 Injured



181 Arrested



Device  
Functioned



Device  
Employed



Device  
Discovered



Bomb-Making  
Material

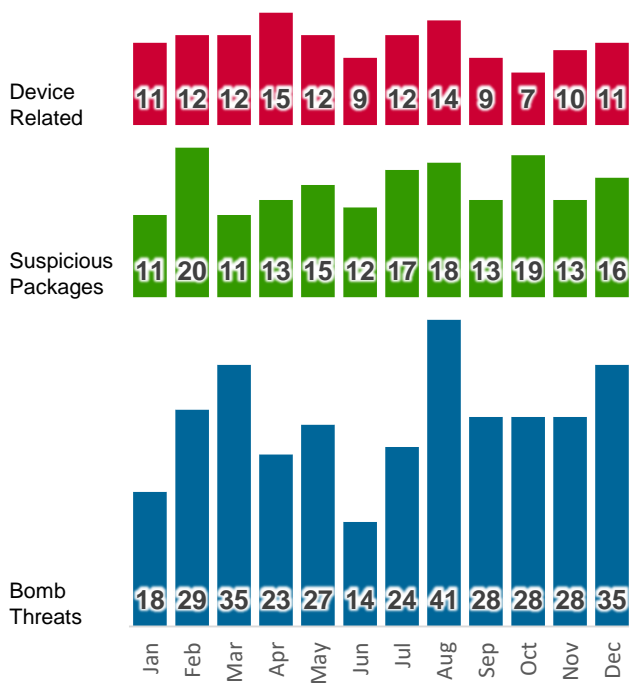


Suspicious  
Package

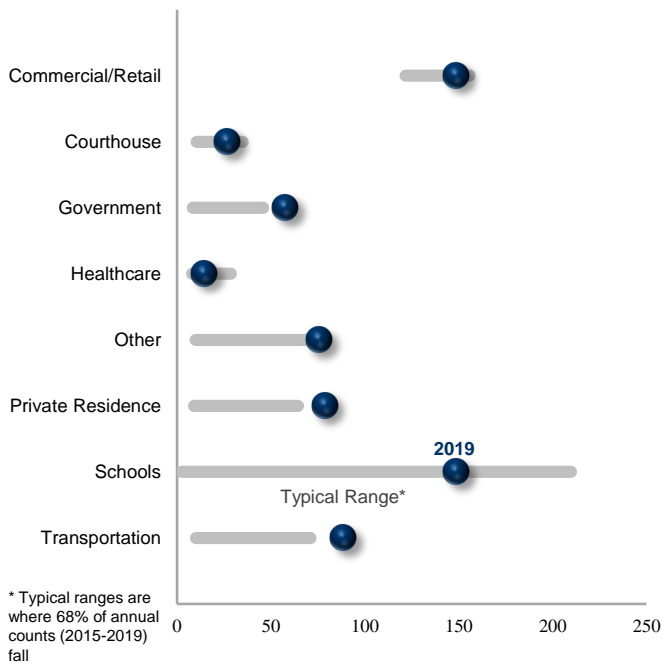


Bomb  
Threat

### Incidents by Month



### Incidents by Infrastructure Type





Region V State	All Incidents		Device Related Incidents	
	2019	per 1m population	2019	per 1m population
Ohio	130	11.1	48	4.1
Wisconsin	58	10.0	19	3.3
Michigan	110	11.0	29	2.9
Minnesota	56	9.9	15	2.7
Indiana	45	6.7	17	2.5
Illinois	90	7.1	19	1.5
Totals	489	9.3	147	2.8

## Region V



2 Killed



13 Injured



149 Arrested



Device  
Functioned



Device  
Employed



Device  
Discovered



Bomb-Making  
Material

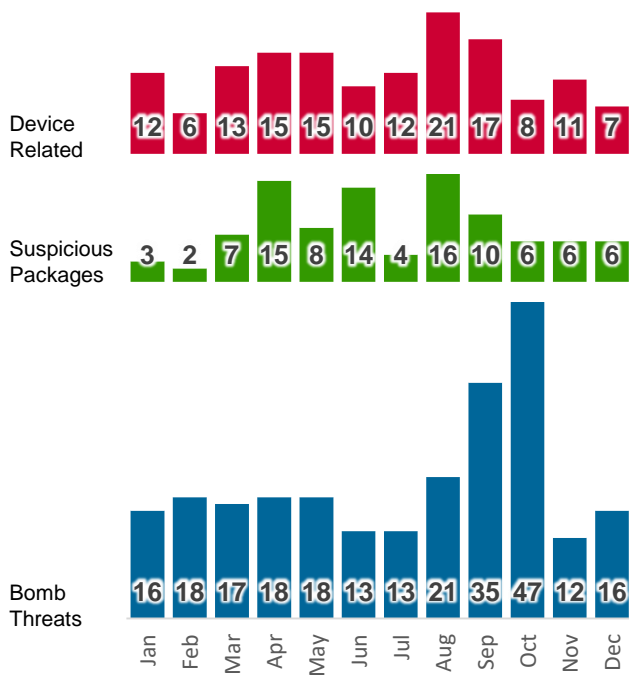


Suspicious  
Package

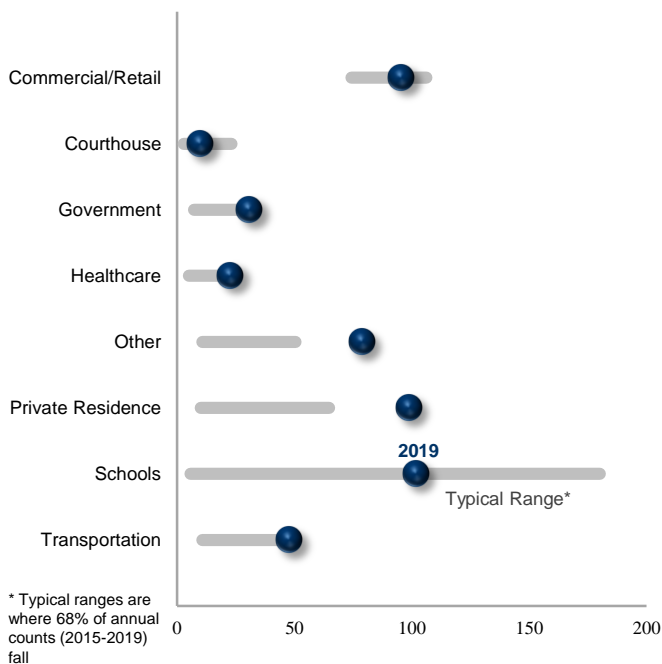


Bomb  
Threat

### Incidents by Month



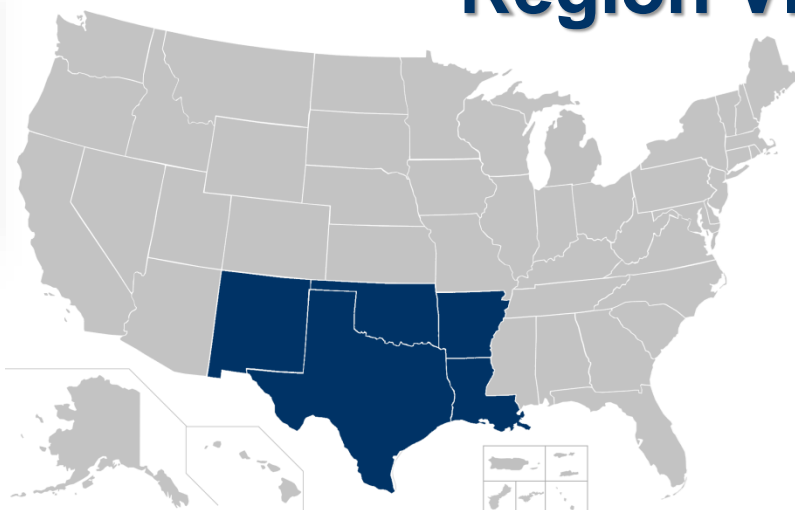
### Incidents by Infrastructure Type





Region VI State	All Incidents		Device Related Incidents	
	2019	per 1m population	2019	per 1m population
Oklahoma	78	19.7	17	4.3
New Mexico	20	9.5	6	2.9
Arkansas	23	7.6	7	2.3
Louisiana	39	8.4	9	1.9
Texas	155	5.3	31	1.1
<b>Totals</b>	<b>315</b>	<b>7.4</b>	<b>70</b>	<b>1.6</b>

## Region VI



1 Killed



10 Injured



105 Arrested



Device  
Functioned



Device  
Employed



Device  
Discovered



Bomb-Making  
Material

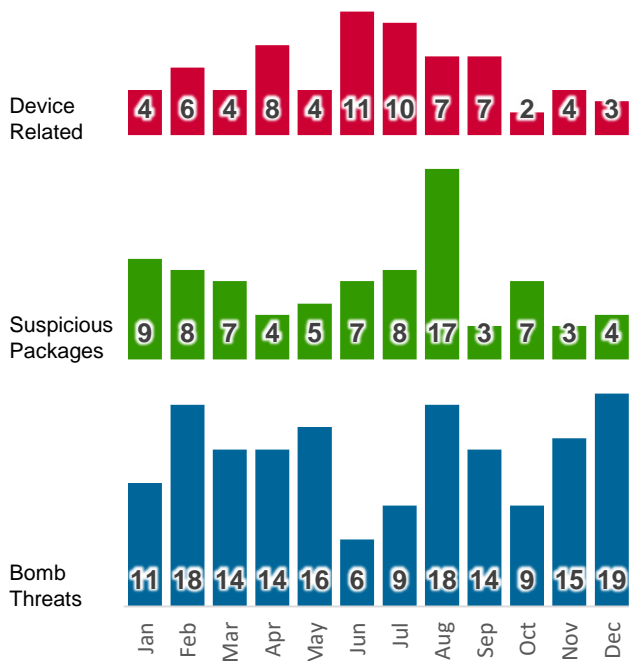


Suspicious  
Package

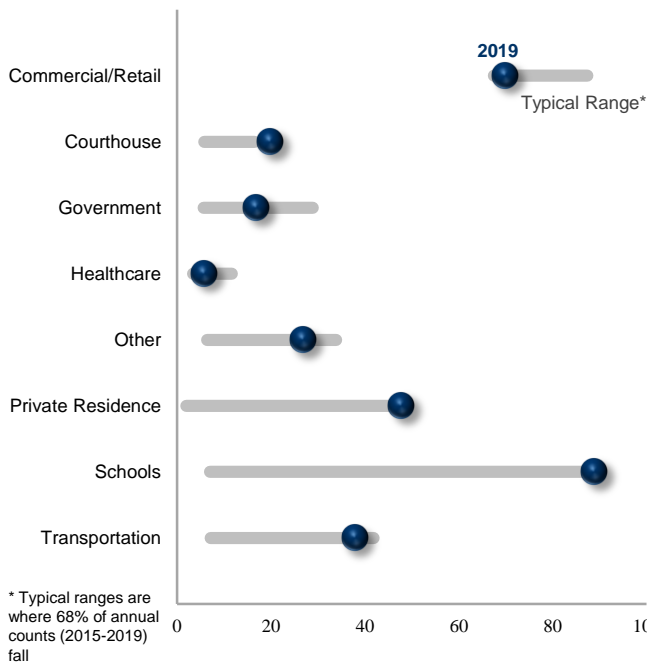


Bomb  
Threat

### Incidents by Month



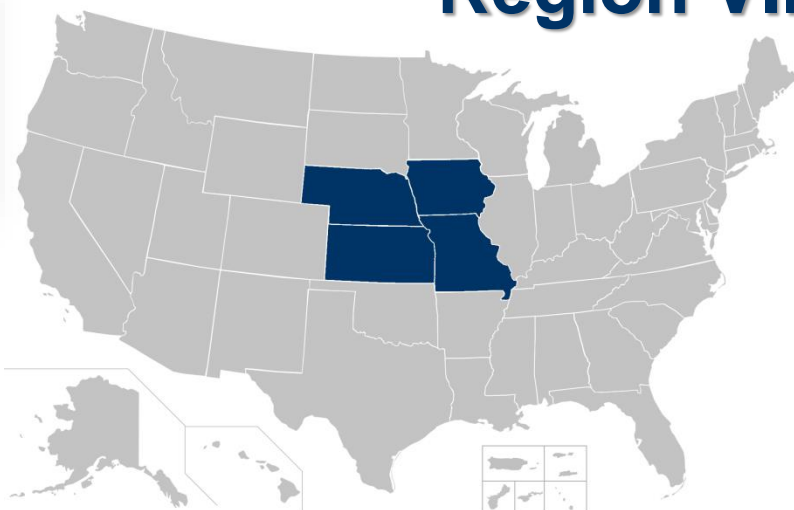
### Incidents by Infrastructure Type





Region VII	All Incidents		Device Related Incidents	
	2019	per 1m population	2019	per 1m population
Kansas	39	13.4	18	6.2
Nebraska	25	12.9	11	5.7
Iowa	27	8.6	11	3.5
Missouri	55	9.0	21	3.4
Totals	146	10.3	61	4.3

## Region VII



4 Killed



2 Injured



40 Arrested



Device  
Functioned



Device  
Employed



Device  
Discovered



Bomb-Making  
Material

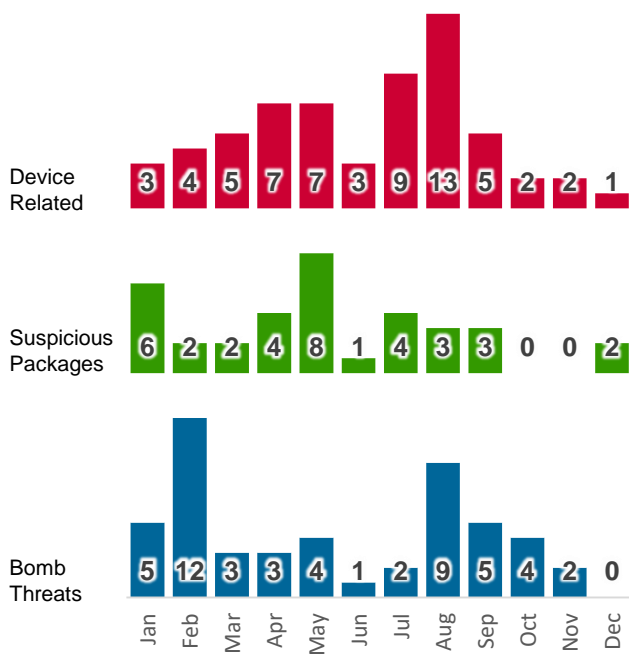


Suspicious  
Package

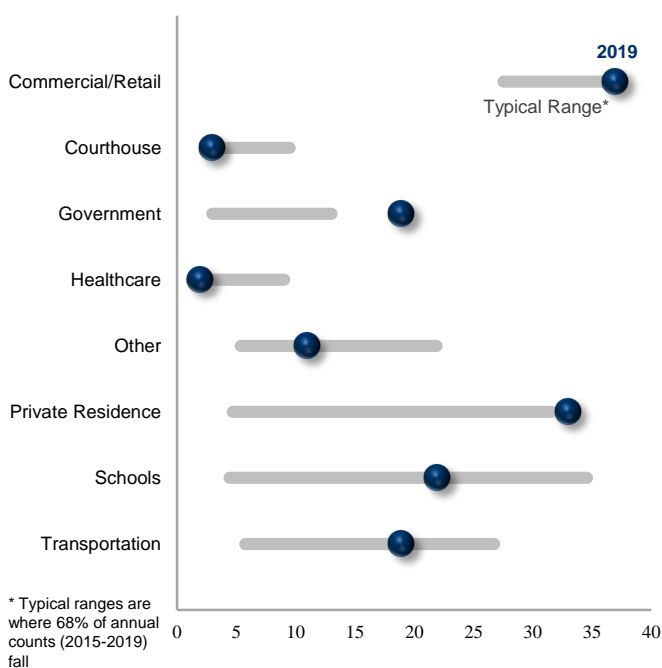


Bomb  
Threat

### Incidents by Month



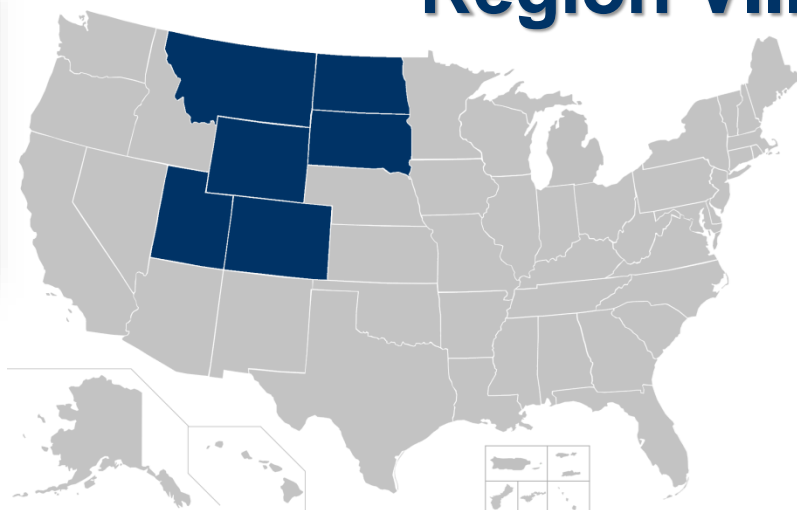
### Incidents by Infrastructure Type





Region VIII State	All Incidents		Device Related Incidents	
	2019	per 1m population	2019	per 1m population
Montana	17	15.9	8	7.5
Utah	41	12.8	13	4.1
North Dakota	11	14.4	3	3.9
South Dakota	9	10.2	3	3.4
Wyoming	14	24.2	1	1.7
Colorado	41	7.1	7	1.2
<b>Totals</b>	<b>133</b>	<b>10.8</b>	<b>35</b>	<b>2.9</b>

## Region VIII



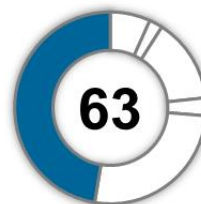
1 Killed



4 Injured



53 Arrested



Device  
Functioned



Device  
Employed



Device  
Discovered



Bomb-Making  
Material

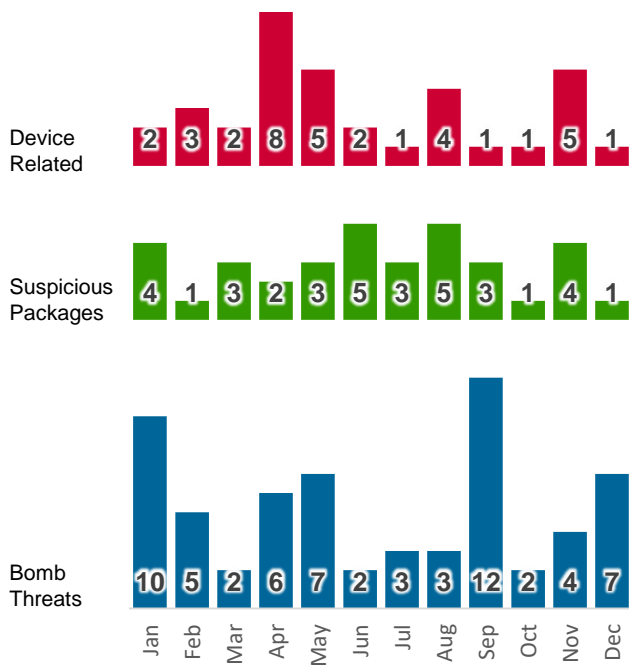


Suspicious  
Package

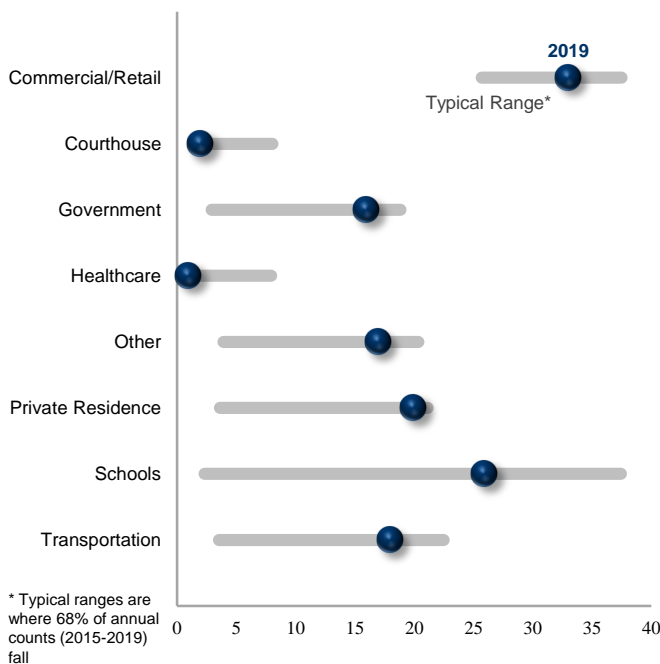


Bomb  
Threat

### Incidents by Month



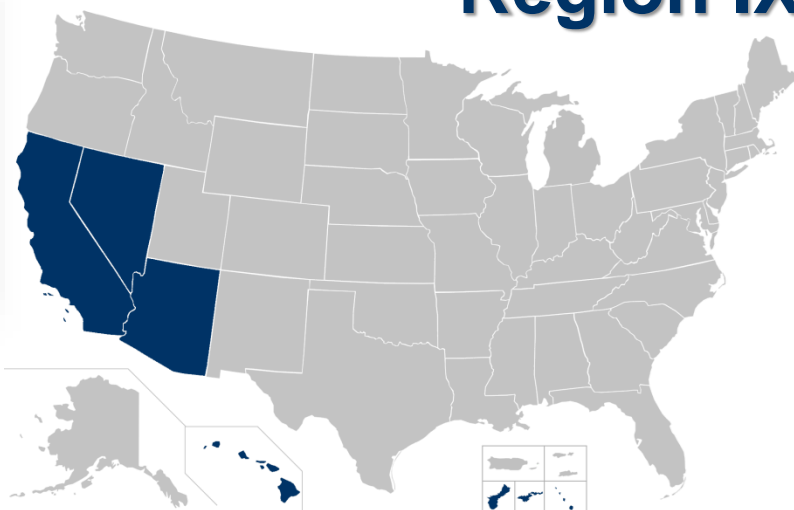
### Incidents by Infrastructure Type





Region IX State	All Incidents		Device Related Incidents	
	2019	per 1m population	2019	per 1m population
Guam	8	43.7	3	16.4
Hawaii	9	6.4	7	4.9
Arizona	53	7.3	17	2.3
California	255	6.5	90	2.3
Nevada	23	7.5	7	2.3
American Samoa	1	18.0	0	0.0
Mariana Islands	1	16.7	0	0.0
Totals	349	6.3	124	2.3

## Region IX



1 Killed



11 Injured



94 Arrested



Device  
Functioned



Device  
Employed



Device  
Discovered



Bomb-Making  
Material

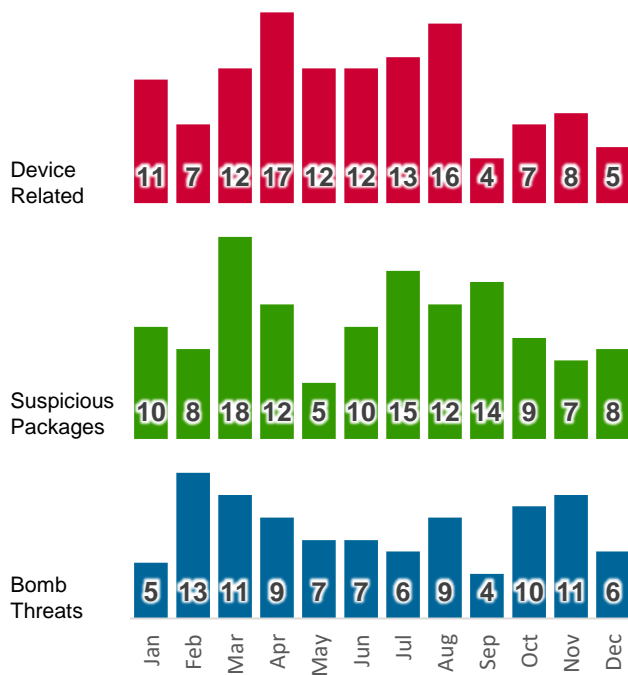


Suspicious  
Package

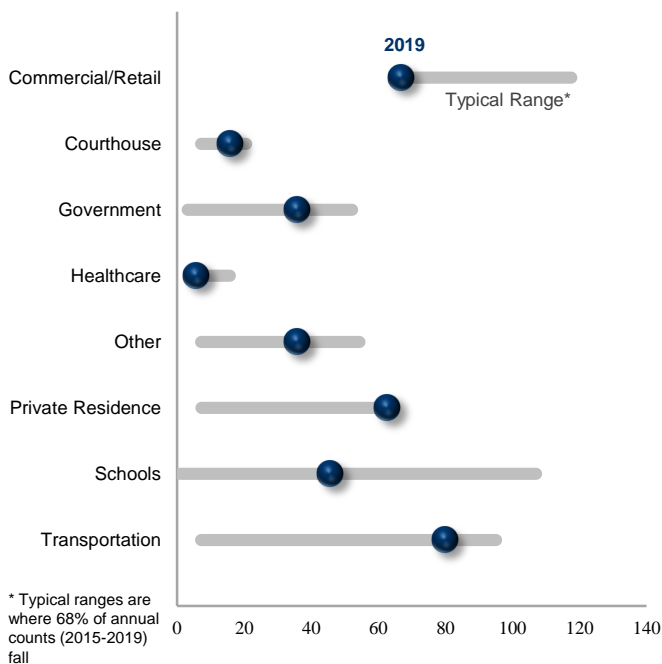


Bomb  
Threat

### Incidents by Month



### Incidents by Infrastructure Type





Region X	All Incidents		Device Related Incidents	
	2019	per 1m population	2019	per 1m population
Idaho	30	16.8	12	6.7
Oregon	46	10.9	18	4.3
Washington	63	8.3	27	3.5
Alaska	5	6.8	2	2.7
Totals	144	10.0	59	4.1

## Region X



1 Killed



3 Injured



54 Arrested



Device  
Functioned



Device  
Employed



Device  
Discovered



Bomb-Making  
Material

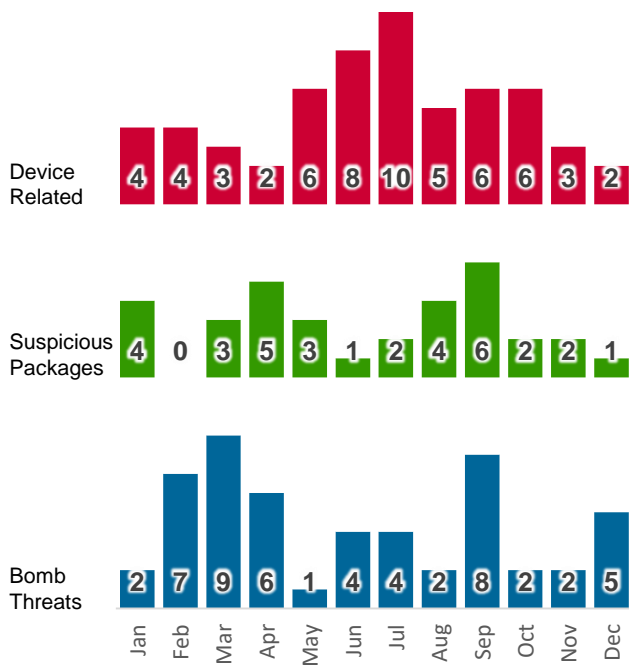


Suspicious  
Package

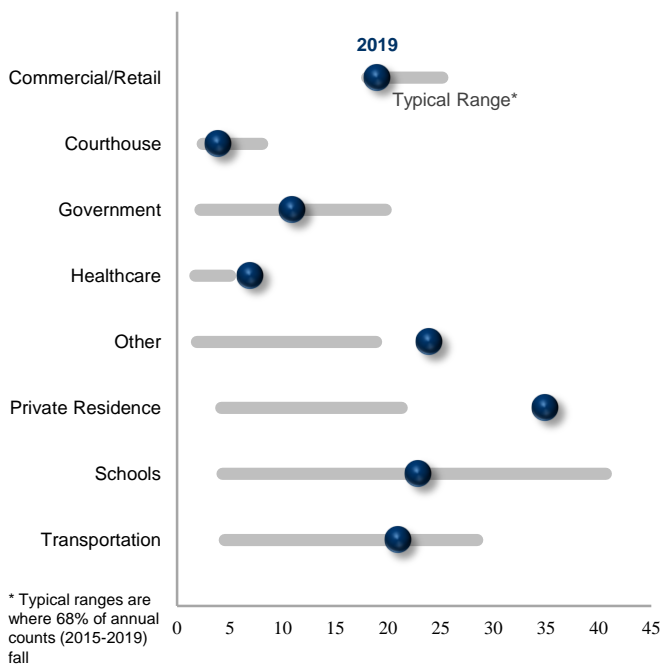


Bomb  
Threat

### Incidents by Month



### Incidents by Infrastructure Type



# 2019 TRIPwire Reports

The following TRIPwire products were published in calendar year 2019 and provide additional information to augment the significant trends and TTPs referenced in this report. TRIPwire open source IED incident reports and related products are available at no cost to registered TRIPwire users. To register for an account, go to the TRIPwire login page at <https://tripwire.dhs.gov> and select “**Register Now.**”

## Extremist Threat Reports (ETRs)

**October - November 2018 Serial Package IEDs** provides summary information and analysis on the 16 IEDs, all similar in construction and appearance, that were delivered to prominent political figures across the United States between 22 October and 1 November 2018. This ETR also identifies the TTPs used by the suspect to conduct his serial bombing campaign.

### **The Al-Saqri Foundation for Military Sciences ETR series:**

**Al-Saqri Foundation for Military Sciences: SolidOX Bomb** provides summary information and analysis on the one-page guide distributed by the Al-Saqri Foundation that provides a list of materials and instructions on how to manufacture an explosive from SolidOX Pellets with readily available items. This guide was produced in Arabic and English and posted on an instant messaging application intended for prospective attackers residing outside conflict zones.

**Al-Saqri Foundation for Military Sciences: Manufacturing a Bomb from Home** provides summary information and analysis on a recent Arabic-language version of the article “Make a bomb in the kitchen of your Mom” from Al-Qa’ida in the Arabian Peninsula’s English-language publication *Inspire*. The guide provides directions for creating an IED with items easily acquired in the West and suggests targets and concealment best practices.

**Al-Saqri Foundation: Four Easy Ways for Making an Explosive Belts [sic] and Vest** provides summary information and analysis on a seven-page guide distributed by the Al-Saqri Foundation that provides step-by-step instructions for four designs of explosive vests for use in suicide person-borne IED attacks. The guide was produced in Arabic, French, and English and posted on an instant messaging application intended for prospective attackers residing outside conflict zones.

## Emergency Responder Notes (ERNs)

### **Indicators of Suspicious Unmanned Aircraft Systems (UASs)**

**Reference Aids for first responders who may encounter HMEs or associated explosive precursor chemicals:**

**Hexamethylene Triperoxide Diamine (HMTD)**

**Methyl Ethyl Ketone Peroxide (MEKP)**

**Homemade Explosives Precursor Matrix**

**DNP – Dinitrophenol**

# INDEX

*The Incident Types used in this report are defined as follows:*

- **Bomb-Making Material:** Materials commonly associated with IEDs, but which were not assembled into a functional device at the time of discovery; this category includes both discoveries and thefts.
- **Bomb Threat:** An intentionally false claim of the presence of a bomb at a certain location.
- **Device Discovered:** The discovery of a hazardous device before the device was emplaced at the targeted location.
- **Device Emplaced:** The discovery of a hazardous device emplaced at a targeted location.
- **Device Functioned:** A hazardous device functioned.
- **Suspicious Package Discovered:** The discovery/examination of an ultimately non-hazardous package.

*The Infrastructure Categories listed in this report are primarily derived from the DHS Critical Infrastructure Sectors. They are as follows:*

Chemical	Financial Services	Healthcare and Public Health
Commercial/Retail	Government Facilities	Information Technology
Communications	• Courthouse	Nuclear
Critical Manufacturing	• Federal	Transportation Systems
Dams	• State	Water
Defense Industrial Base	• Local	Non-Critical Infrastructure
Emergency Services	• National Monuments	• Other (e.g., faith-based facilities)
Energy	• Parks	• Postal and Shipping
Food and Agriculture	• Schools	• Private Residence

*The Federal Regions used in this report are as follows:*

<b>Region I</b>	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
<b>Region II</b>	New Jersey, New York, Puerto Rico, U.S. Virgin Islands
<b>Region III</b>	Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia
<b>Region IV</b>	Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee
<b>Region V</b>	Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin
<b>Region VI</b>	Arkansas, Louisiana, New Mexico, Oklahoma, Texas
<b>Region VII</b>	Iowa, Kansas, Missouri, Nebraska
<b>Region VIII</b>	Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming
<b>Region IX</b>	Arizona, California, Hawaii, Nevada, American Samoa, Guam, Trust Territory of the Pacific Islands
<b>Region X</b>	Alaska, Idaho, Oregon, Washington

# GLOSSARY

*The Device Types used in this report are listed below:*

- **Bomb-Making Materials (BMM):** Components that are 1) part of an IED or improvised weapon system; 2) tools required to produce the components; or 3) precursors to the manufacture of IED components, to include explosives.
- **Chemical Pressure Bomb:** Uses overpressure based on a chemical reaction to create an explosive effect, e.g., bottle bomb and Drano bomb.
- **Commercial Explosives:** Produced and used for commercial, industrial, or recreational applications, e.g., C4 and dynamite.
- **Explosive Precursor Chemical (EPC):** Chemicals that can be used, through blending or chemical reaction, to produce HMEs.
- **Hoax Device:** Device specifically fabricated to resemble and intended to simulate an IED, or a false warning of the presence of an IED, in order to elicit a response.
- **Improvised Explosive Device (IED):** A device fabricated in an improvised manner that incorporates destructive, lethal, noxious, pyrotechnic, or incendiary chemicals and is designed to destroy, incapacitate, harass, or distract, which may incorporate military equipment or ordnance but is normally devised from non-military components.
- **Improvised Incendiary Device (IID):** A device with chemical mixtures and flammable liquids that is designed to cause fire or start fires, e.g., Molotov cocktails and firebombs.
- **Ordnance:** Military-grade munitions that include projectiles, grenades, rockets, etc.
- **Person-Borne IED (PBIED):** A device that is worn, carried, or housed by a person, either willingly or unwillingly, and includes suicide vests/belts, etc.
- **Pipe Bomb:** An IED concealed or confined within a sealed tube, such as PVC or metal piping or cardboard tubing.
- **Pyrotechnic Device:** A device composed of materials capable of undergoing self-contained and self-sustained chemical reactions to produce heat, light, gas, smoke and/or sound, e.g., fireworks and flares.
- **Unknown:** Unidentified event that is not a suspicious package or bomb threat.
- **Vehicle-Borne IED (VBIED):** An IED integrated into a vehicle with an intent to strike external targets.

\***Typical Range** is a confidence interval where 68% of the previous incident counts have occurred. Incident counts falling above or below this range are unusual and should be examined further to understand the circumstances.

*Definitions are derived from the Improvised Explosive Device (IED) Technical Exploitation Lexicon, 5<sup>th</sup> Edition, 15 May 2017*

## CONTACT

Questions, feedback, and/or comments regarding the 2019 Regional Domestic OSINT IED Report can be directed to the **TRIPwire** Help Desk at [tripwirehelp@dhs.gov](mailto:tripwirehelp@dhs.gov) or by selecting the “Contact Us” tab at the top of the **TRIPwire** homepage.